

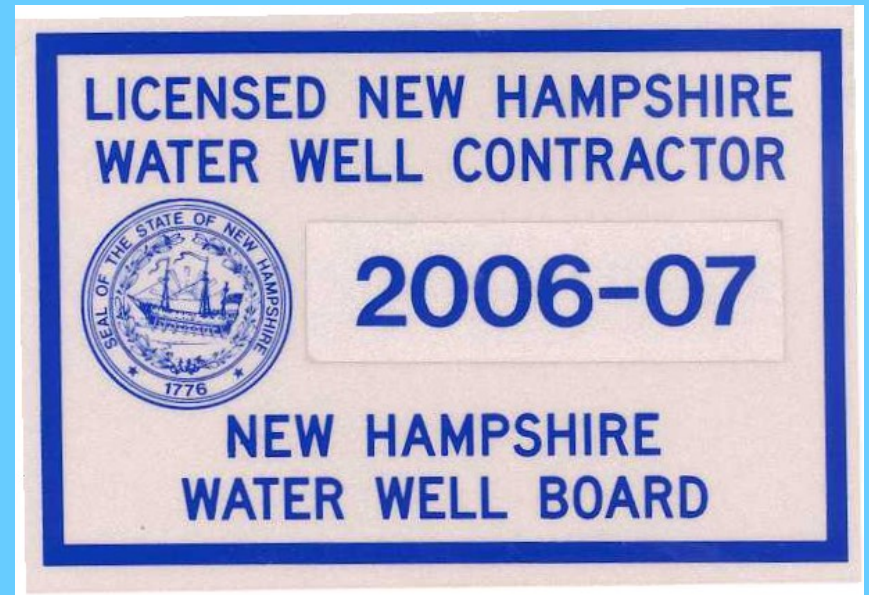
Water Well Program

- Licensing
- Well Construction Standards
- Pump Installation Standards
- Enforcement
- Reporting

Licensing

License Types

- Rotary Drilling
- Cable Tool Drilling
- Point Well & Wash Well Construction
- Dug Well Construction
- Monitoring Well Const
- Pump Installations:
 - Domestic & Industrial



New Hampshire Statistics

Common Well Types

% Total Wells

- | | |
|---|-----|
| 1) Wells Drilled in Bedrock | 96 |
| 2) Wells Constructed in Sand and Gravel | 3.5 |
| 3) Dug Wells Constructed by Excavation | 0.3 |

	Average Depth [ft]	Deepest Well [ft]	Average Yield [gpm]
Bedrock Wells	350	2120	15
Gravel Wells	76	392	47
Point Wells	36	120	15
Dug Wells	15	30	45

1,370 Wells range from 1,000 to 2,000 feet deep!

Home Water Supply

Three Things a Homeowner Needs to Know

- 1) What Type of Well?
- 2) How Much Water?
- 3) Is the Water Safe to Drink?

Well Design and Construction

A Function of the Geologic Environment

New Hampshire's Aquifers

The Bedrock Aquifer

Glacial Stratified Drift Aquifer

(14% of land area)

Upland Till Aquifer

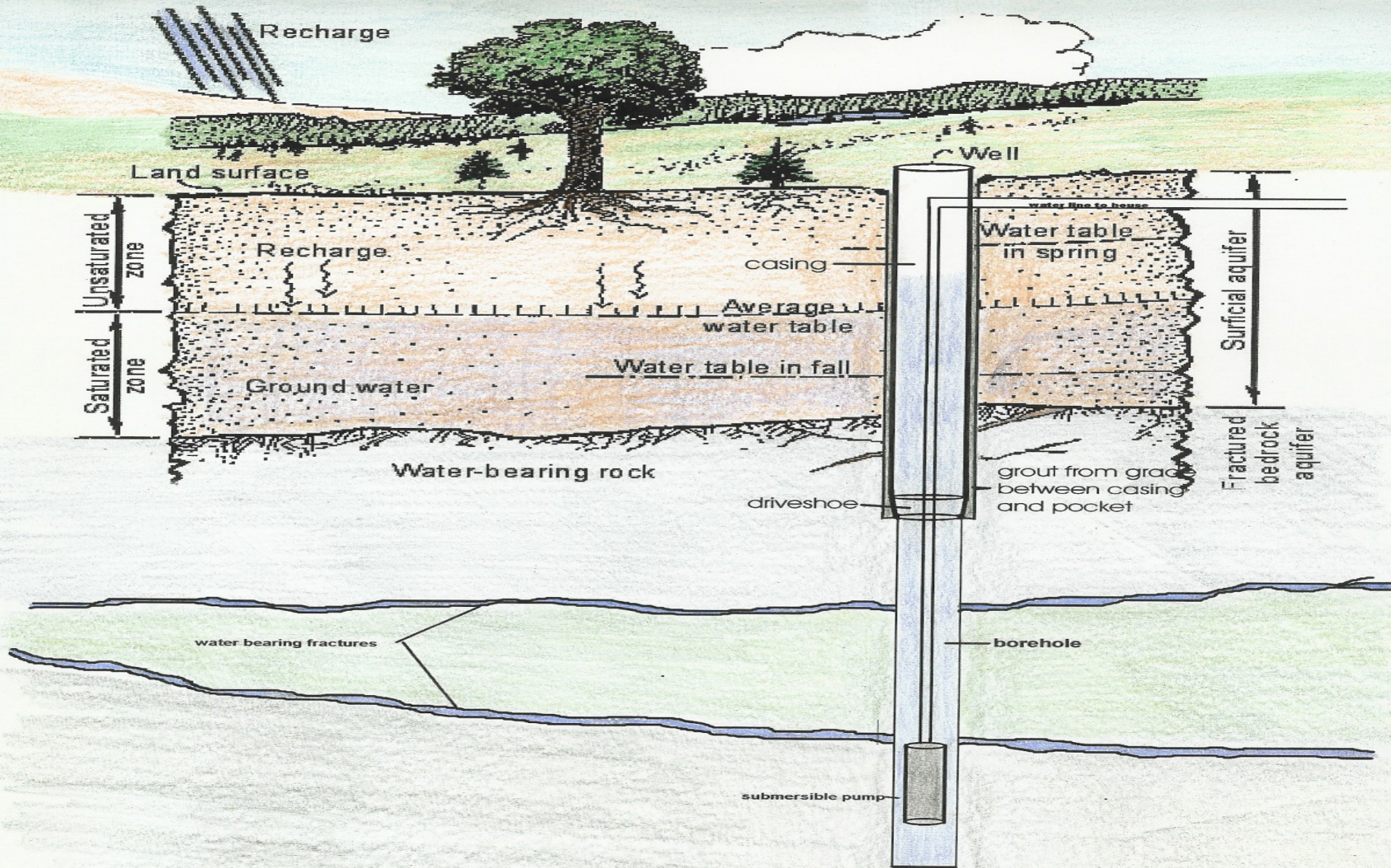
02.13.2005



Bedrock Aquifer



Bedrock Well Design





Air Rotary



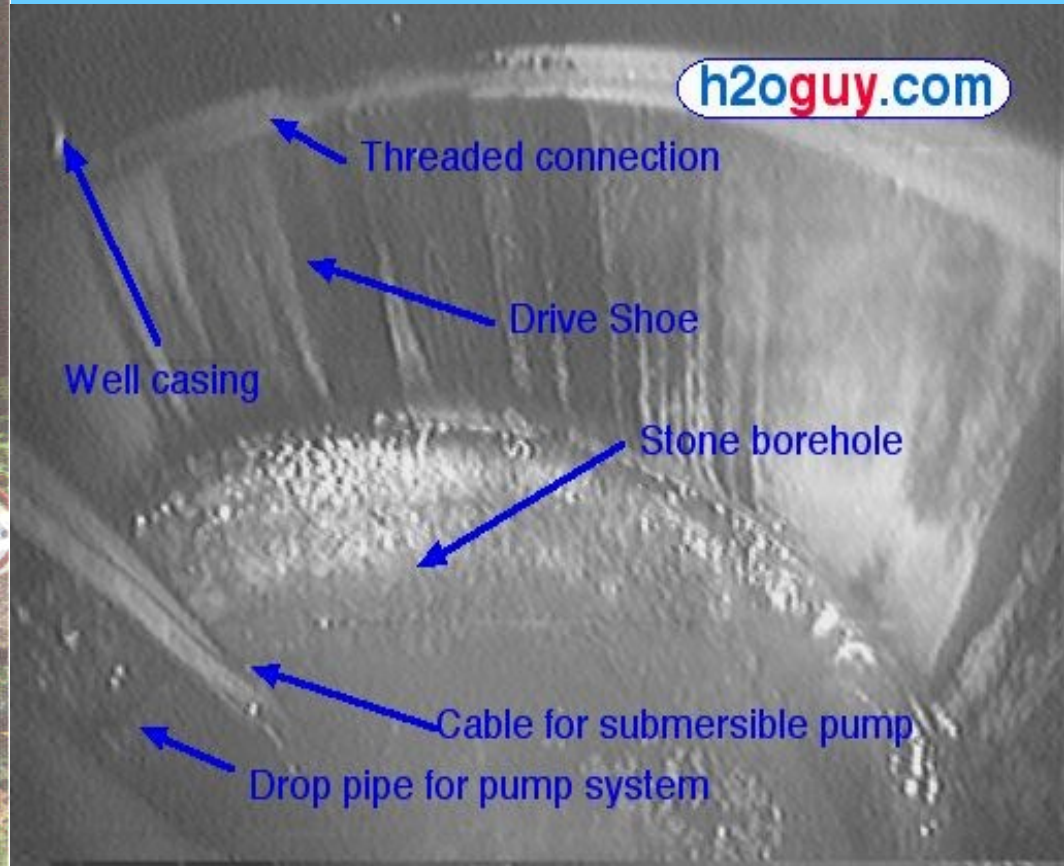
Mud Rotary



Cable Tool Drilling



Setting Casing



Stratified-Drift Aquifer



Gravel Wells



Point Wells



Dug Wells













Yield Test Methods

Percent of Wells

Pump Test

2%

Bailed

5%

Compressed Air

92%

Compressed Air Test



Compressed Air Test



Well Yields

Domestic Bedrock Wells

Yield Range [gpm]	Percent of Total
Greater than 5	60%
Between 2 and 5	30%
Between 2 and 0.5	9%
Less than 0.5	1%

No State Requirement for Well Yield

Recommended Minimum Capacity

600 Gallons within a 2 Hour Period at Least
Once Per Day

Equal to:

5 Gallons per Minute for 2 Hours

Minimum Capacity Table

Supply 600 Gallons in 2 Hours

Sustained Well Yield [gpm]	Required Well Depth [ft]
0.5	400
1	360
1.5	320
2	280
2.5	240
3	200
3.5	160
4	120
4.5	80
5	---

Recommended Optimum Capacity

960 Gallons within a 4-Hour Period at Least
Once Per Day

Equal to:

4 Gallons per Minute for 4 Hours

Optimum Capacity Table

Supply 960 Gallons in 4 Hours

Sustained Well Yield [gpm]	Required Well Depth [ft]
0.5	600
1	520
1.5	440
2	360
2.5	280
3	200
3.5	120
4	---

Hydro-Fracturing



Hydraulic Pressure



NEW HAMPSHIRE WATER WELL BOARD

CODE OF ADMINISTRATIVE RULES

Chapter We 100 - We 1000

- **Organization**
- **Licensing**
- **Water Well Construction**
 - **Well Maintenance**
 - **Well Abandonment**
- **Pump Installations**



Last Revised 6-9-2000



Well Location

Setback Requirements

- 75 ft Property Boundaries
- 75 ft Septic System Leach Fields
- 75 ft Septic Tanks
 - Exception: May be reduced to 50 ft when tanks are sealed and grouted and sewer pipe is SDR 26 or better
- Non-Conforming Locations

Well Head

- **8 Inches Above Ground**
- **Sealed Cover**
- **Screened Vent**
- **Electrical Conduit Secured to Cover**
- **Submersible Pump Grounded & Bonded to Casing**
- **Water Tight Wire Connections**



Non-Compliant Covers



No Cover!



Well Pits



Before



After



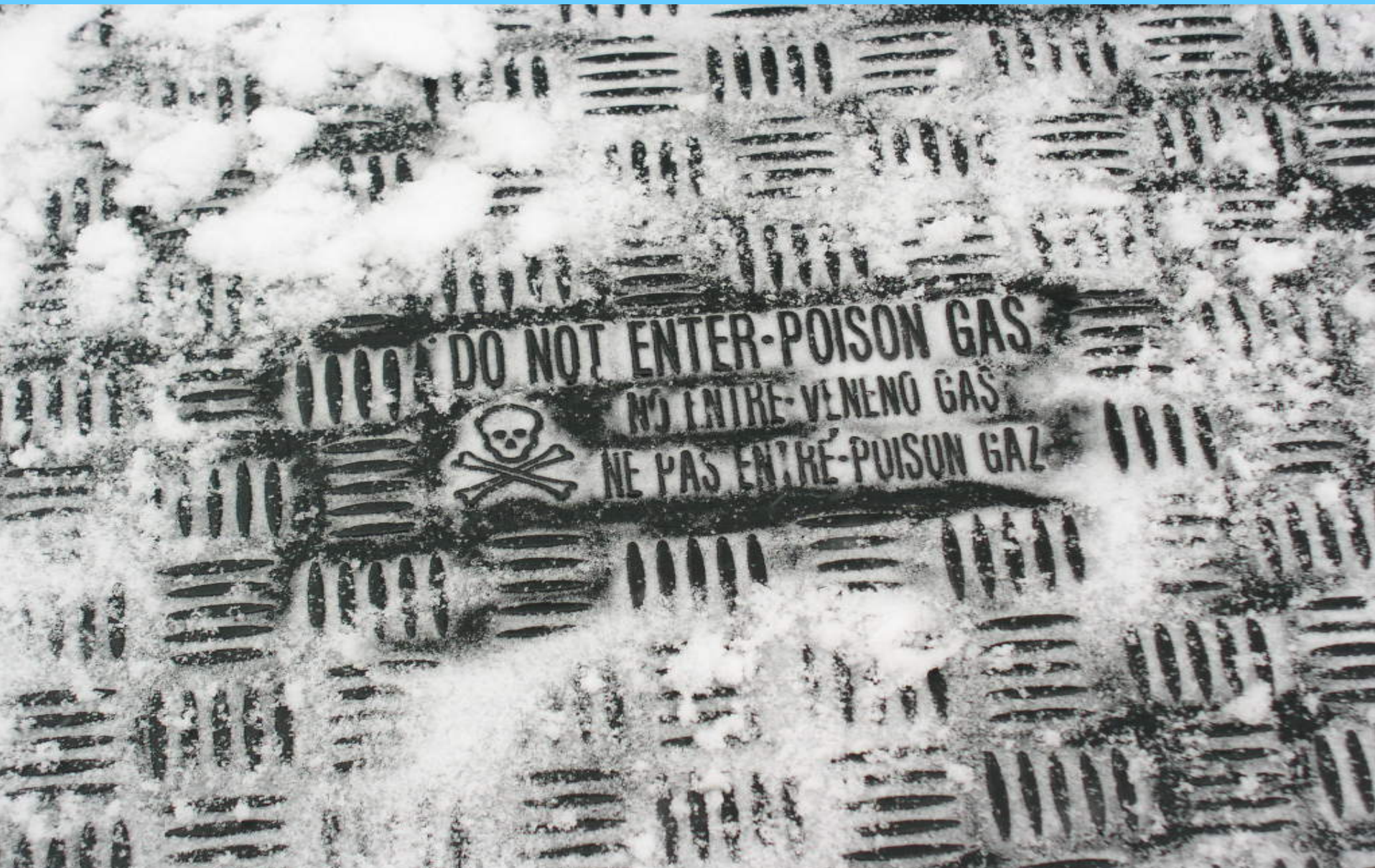
Unconventional Wells



Unlicensed Contractors



Well Cover



Well Information

Well Construction Details on the Web

www.des.nh.gov/wwb

Or Call

NH Geological Survey at (603) 271-1973



WSEB Water Well Query

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[Questions/Comments:
WSEB Program Contact](#)

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[Query
Instructions](#)

Town:

Alternate Town

Road

Owner Last Name or Company Name

Well Completed Between and

State Well ID

Driller Well ID

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*Database populated and maintained by the NH
Geological Survey*



BUYERS
BEWARE
ASK ME ABOUT
MY WELL !!